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**Parental Perception of Childhood Obesity and the School's Role on Prevention and
Interventions in Childhood Obesity**

By

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A thesis submitted to the faculty of
Gardner-Webb University School of Nursing
in partial fulfillment of the requirements for the
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ABSTRACT

Childhood obesity is a major health crisis that is becoming an epidemic among children and adolescents. Interventions must begin early and focus on prevention strategies to achieve the goal of increasing quality years of life for today's children and families. Parents with children in a local after school Boys & Girls club were surveyed regarding their perception of childhood obesity, the causes of childhood obesity, and the school's role in the prevention and treatment of childhood obesity. More than 90% of the participants identified inactivity, poor eating behavior, eating too much, and lack of money to buy nutritious foods as the main causes of childhood obesity. Participants agreed that physical education classes and elimination of junk food machines in schools is a strategy towards the school's role in prevention and treatment of childhood obesity. All participants agreed that normal weight is important to the health of children in the study.

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CHAPTER ONE

INTRODUCTION

Childhood obesity is one of the most pressing health threats facing the United States. Over the past 30 years, the prevalence of obesity has nearly tripled for children 2 to 5 years of age and youth 12 to 19 years of age, and it has quadrupled for children 6 to 11 years old. Obesity in children is a serious and worsening problem that will have dramatic health effects on future generations. Obesity itself is a complex disease, and additional insight is required to design effective preventive programs. However, because of the seriousness of the problem, preventive efforts must begin immediately and continue to be modified as we learn more about the etiology of the obesity epidemic. Behaviors related to diet and physical activity are established early in life, and modeled by family members making early prevention efforts addressing children and their family members critical to prevent obesity. First Lady Michelle Obama has placed the childhood obesity epidemic where it belongs for the first time in United States history--on center stage by initiating a program called "Let's Move" (Wellspring Camp, 2010). The program involves getting parents better informed about nutrition and exercise, improving the quality of food in schools, making healthy foods more affordable and accessible for families, and focusing more on physical education. Childhood obesity has long-lasting and serious negative health consequences that may affect the health of future generations; efforts must begin immediately to mount a unified and cooperative strategy to prevent obesity in children.

BACKGROUND

Obesity is a major public health problem for children in the United States and worldwide. The prevalence of overweight and obesity in children and adolescents is higher than it was 20 years ago in all racial/ethnic groups, and the rate of childhood obesity is increasing yearly, particularly among low-income and minority children. The epidemic of obesity is of such concern that *Healthy People 2010* has deemed obesity and overweight collectively as one of the 10 leading health indicators that measure the success of the United States in “increasing quality years of life and eliminating health disparities” among Americans (U.S. Department of Health and Human Services, 2000). The Centers for Disease Control and Prevention (CDC) uses a measurement called percentile of Body Mass Index (BMI) to define overweight and obesity in adolescents and children. Childhood overweight problem which is BMI between 85th and 95th percentile on growth chart and obesity of BMI more than 95th percentile are among the fastest growing epidemics in the United States (CDC, 2010). It is clear that obesity in children is easy to recognize, however the challenge lies in identifying the underlying risk factors for obesity and eliminating the barriers that prevent children from attaining a healthy weight. Prevention is the key to controlling the current epidemic of childhood obesity. It is such a serious problem that preventive efforts must begin and continue to be modified as more research is gained about the specific causality of the alarming increase in childhood obesity prevalence. To prevent childhood obesity, more research is needed to better define the critical periods in childhood for obesity development, to identify the factors that promote the onset and persistence of obesity during these vulnerable periods. With further research, effective intervention strategies can also combat childhood obesity.

Interventions must begin early and must focus on prevention to achieve the goal of increasing quality years of life. Currently there is the lack of unified strategy that incorporates intervention methods proven to be effective. There is a low level awareness of the childhood obesity problem and by the low priority it is given in communities and at the state and national levels. Successful interventions can be effective in promoting increased activity, healthy food choices, and positive behavior to overcome childhood obesity. Increasing energy output through increased physical activity plays an important role in preventing and reducing obesity related illnesses. Early prevention efforts addressing children and their families are important to prevent obesity. The ideal obesity prevention program should include a healthy diet, and exercise curriculum.

PURPOSE OF THE STUDY

Childhood obesity is a major health crisis that is becoming an epidemic among children and adolescents. It is estimated that over 12 million American children ages 2-19 years of age are overweight, primarily females. Interventions must begin early and focus on prevention strategies to achieve the goal of increasing quality years of life for today's children and families. The purpose of this proposed study is to examine the contributing factors to childhood obesity, parental perceptions of childhood obesity and the school's involvement and to identify prevention strategies in controlling this epidemic. The obesity epidemic occurs disproportionately in African American children making obesity prevention essential in this population. The proposed study will educate children ages 5 to 12 years of age and their families in prevention strategies and early

intervention techniques in a community setting in the piedmont region of South Carolina. The intent of the proposed study is to identify factors that will decrease the prevalence of childhood obesity through prevention and early intervention.

SIGNIFICANCE OF THE PROBLEM

Childhood obesity is a significant threat to the long-term health and well-being of American children. Obesity contributes to a significant burden in terms of chronic diseases, rising healthcare costs, and disability and premature death. Childhood obesity has significant medical, psychological, and economic ramifications. The medical consequences of obese children have resulted in a higher prevalence of high blood pressure, early development of atherosclerosis; type 2 diabetes mellitus, fatty liver disease, polycystic ovary disorder, heart disease, high cholesterol, orthopedic disorders, asthma, sleep apnea and psychiatric disorders, such as depression, social isolation and eating disorders. Although these illnesses are more common among adults, they all have been identified in children and at an increasing rate associating adult overweight and obesity complications both short and long term now and in the future as adults. The economic issues associated with childhood obesity places a burden on the United States. In the United States, childhood obesity affects approximately 12.5 million children and teens, which accounts for 17% of that population (Bell, Rogers, Dietz, Ogden, Schuler, & Popovic, 2011). The expenditure is on the rise and would augment at a faster rate due to increasing prevalence of the obesity, and creation of more programs targeted at the prevention and treatment of this problem. The related hospital cost of obesity-associated diseases in children 6 to 17 years of age increased over a 20-year period from \$35 million to \$127 million, while at the same time the prevalence of obesity increased from 10% to

17.1% for children aged 2 to 19 years of age (CDC, 2006). Medical costs associated with overweight and obesity involves both direct and indirect costs which include preventive, diagnostic, and treatment services related to obesity, as well as morbidity and mortality cost. In addition to the medical consequences and economic burden, the psychosocial consequences consist of decreased health-related quality of life, lower body satisfaction, lower physical appearance, decrease self-esteem and issues with self-concept, body image, and peer relationships. Overweight children experience more teasing and bullying in peer relationships which increases the risk for depressed adolescents. Quality school physical education programs that keep children moving the majority of their time in physical education class should be implemented.

RESEARCH QUESTIONS

The research questions in the proposed study, “Parental Perception of Childhood Obesity and the School’s Role on Prevention and Interventions in Childhood Obesity” are: (a) Parental perceptions of causes of childhood obesity and the school’s role in the prevention and treatment; and (b) can prevention and early interventions decrease the prevalence of childhood obesity?

DEFINITION OF TERMS

Conceptual Definition

Childhood obesity: a condition where excess body fat negatively affects a child's health or wellbeing (CDC, 2010).

Operational Definition

The Body Mass Index (BMI): a measure of body fat based on height and weight, Age-Growth chart and a questionnaire were the tools used to evaluate parental perception to measure childhood obesity.

Age-growth charts: tools that contribute to forming an overall clinical impression for the child being measured that consist of a series of percentile curves that illustrate the distribution of selected body measurements in children.

THEORETICAL FRAMEWORK

The Health Promotion Model (HPM) (1982) is the theoretical framework used in the proposed study. The theory is of Mid-Range Theories by Nola Pender using the Health Promotion Model. The HPM is based on the understanding that an individual will take a health promoting action. HPM theoretical proposition statements derived from the model provide a basis for investigative work on health behaviors. The HPM exhibits a positive affect toward a behavior results in greater perceived self-efficacy, which can in turn, result in increased positive affect. Persons are more likely to commit to and engage in health-promoting behaviors when significant others model the behavior, expect the behavior to occur, and provide assistance and support to enable the behavior. The HPM applies to childhood obesity because it provides a framework in which to understand self-initiated reconfiguration of person-environment interactive patterns is essential to behavior change. The HPM focuses on understanding and addressing variables that are most predictive of given health behaviors. In this study, the Health Promotion Model addresses childhood obesity concepts in the following manner:

1. Perceived benefits are parents and school workers can increase commitment to and engagement in health-promoting behavior.
2. Perceived barriers are prior behaviors and inherited and acquired characteristics influences beliefs, affect, and enactment of health-promoting behavior.

Parental involvement creates a supportive environment and helps promote a healthy eating habit of eating the recommended servings of fruits and vegetables, and physical activities every day. Persons are more likely to commit to and engage in health-promoting behaviors when significant others model the behavior, expect the behavior to occur, and provide assistance and support to enable the behavior.

Childhood obesity continues to increase even with awareness as a national health crisis. Current statistics regarding the growth of childhood overweight are alarming, especially in light of the potential short and long term health consequences. It is clear that interventions must begin early and must focus on prevention to achieve the goal of increasing quality years of life. Focusing on children at risk for obesity and parent-focused interventions can increase a change for health behaviors to decrease the epidemic of childhood obesity. Using the age-growth chart and assessing BMI's of at risk children is a positive step forward in addressing the issue early on and setting up interventions to promote healthy food selections, healthy lifestyle choices, increase physical activity and parental involvement.

CHAPTER TWO

Literature Reviews

Childhood obesity is a major health crisis that is becoming an epidemic among children and adolescents. A review of literature revealed numerous studies addressing childhood obesity among children and adolescents. A descriptive study was conducted by Murphy and Polivka (2007), to gain an understanding of parental perceptions of the school's role in addressing childhood obesity. Parents with a school-age child in a suburban latchkey program were surveyed regarding their perceptions of childhood obesity, body mass index, and the schools role in prevention and treatment of obesity. A convenience sample of 117 surveyed participants was used in the study. The researchers found that more than 80% of the participants identified inactivity, poor eating behavior, lack of parental control in what children eat, and eating too much as the main causes of childhood obesity (Murphy and Polivka, 2007). Researchers identified that 36.2% of parents felt the schools were not doing enough and strongly supported units on nutrition and weight control, and that schools should eliminate junk food machines (Murphy and Polivka, 2007). By supporting these strategies, parents indicated that schools should have a role in childhood obesity (Murphy and Polivka, 2007).

Fletcher, Cooper, Helms, Northington, and Winters (2009), conducted a descriptive, development pilot research study to develop the first weight control program and model specifically designed for African American children. A random target sample of 12 females and males, ages 13-17, with body mass index (BMI) >25 was used in the study. The researchers revealed a decrease in waist girth of greater than 4 inches, a

decrease in BMI, and positive behavioral changes. It is important to improve the health of the participants with emphasis on weight control and reduction to reduce adverse health outcomes in African American children. The participants learned lifelong healthy behaviors that could reduce the risk for weight related diseases through healthy lifestyle choices and increased physical activity (Fletcher, Cooper, Helms, Northington, and Winters, 2009).

Lown and Braunschweig (2008) utilized a cross-sectional study to examine the relationship of puberty, sedentary behaviors, and psychosocial influences with the intention for physical activity and level of physical activity in low income, overweight African American girls. A convenience sample of 72 African American girls was used in the study. African American girls have been found to have the lowest self-efficacy for physical activity as compared to African American boys and white girls and boys (Lown and Braunschweig, 2008). The researchers found that puberty in overweight African American girls was significantly associated with lower intention and lower self-efficacy; and high prevalence of sedentary activity which negatively influenced moderate activity (Lown and Braunschweig, 2008). The researchers identified that social support and health beliefs were significantly associated with intention for physical activity in this study (Lown and Braunschweig, 2008). Puberty, health beliefs for physical activity, and social support from parents and peers were significant predictors of intentions for physical activity in low-income, overweight African American girls (Lown and Braunschweig, 2008).

A descriptive-correlation study by Evans, Renaud, Finkelstein, Kamerow, and Brown (2006) examined changes in public attitudes about obesity in the context of a

changing social and policy environment around the issue compared to the prior survey. A randomized sample of 1139 United States households was used in the study. The researchers found that perceived health threat of childhood obesity increased between the two surveys. Support increased for interventions such as regulation of restaurant portions and fast food advertising. The study confirms that there is strong and growing public support for interventions aimed at reducing overweight and obesity among children and adolescents and wants action by governmental and other public health organizations to combat it (Evans, Renauld, Finkelstein, Kamerow, and Brown, 2006). So although increased public attention to childhood obesity may affect the public's intervention priorities, strategies that involve taxation remain largely unsupported (Evans, Renauld, Finkelstein, Kamerow, and Brown, 2006).

A descriptive study by Davis, Young, Davis, and Moll (2008) investigated the relationship between parental factors, family functioning, and childhood obesity. A convenience sample of 44 parents and 44 children volunteered for the study. The researchers found that family variables appear very important to the development of obesity. A significant relationship was observed between parental and child body mass index (BMI). Approximately 33% of the parents in the study were clinically diagnosed as depressed, and BMI and physical activity were significant predictors of this depression (Davis, Young, Davis, and Moll, 2008). If prevention and treatment are to be addressed in childhood obesity then parental depression should be further investigated. Interventions designed to increase parents ability to cope with depression might have an additive on programs designed to bring children weight under control (Davis, Young, Davis, and Moll, 2008).

Davis and Davis (2008) conducted a descriptive thematic framework study that examined the experience of childhood obesity from the perspective of African American children in Mississippi who were experiencing a body mass index (BMI) at the 95th and higher percentile. A non-random sample of 17 African American children with BMIs at the 95th percentile or higher, from ages 8-11 participated in the study. The researchers revealed that short and long term consequences of bullying and teasing of children who are obese, as well as the attitudes of educators of children who are obese need to be assessed and play a role in childhood obesity. Results revealed that children desire to lose the weight but may not have the mechanisms at home or school to support this desire (Davis and Davis, 2008). The researchers identified specific recommendations for advocates of a healthier lifestyle of all children include; 1) Mandatory activity and education programs, 2) Development, education, and implementation of family-centered fun, 3) Involvement with nutritionist with meal planning in settings where children socialized in dietary practices (Davis and Davis, 2008).

A descriptive study was conducted by Moyers, Bugle, and Jackson (2005) that examined school nurse perceptions of childhood obesity as a health risk and how they perceive their role in prevention, identification, and treatment of the condition. A randomized sample of 168 school nurses within the Missouri 8th Congressional District was surveyed in the study, using a 55-item questionnaire. The researchers found that the majority of the nurses found counseling both children and their parents about weight loss to be difficult and felt incompetent in prescribing a weight loss program. School nurses in the study supported preventive interventions, but were less accepting of treatment and counseling for obese children in the school setting (Moyers, Bugle, and Jackson, 2005).

The study identified that school nurses, by virtue of their access to the majority of the nation's children, have the potential to provide preventive education, as well as counseling and referral to children who are obese (Moyers, Bugle, and Jackson, 2005).

Nemet et al., (2005) conducted a randomized prospective study that examined prospectively the long term (1 year) effects of a brief (3 months) combined dietary-behavioral-physical activity intervention on body weight, body mass index (BMI), BMI percentile, body composition, habitual physical activity, fitness, and serum lipids among obese Israeli children and adolescents. A randomized sample of 24 obese intervention subjects and 22 obese control subjects was used in the study. The study found that after the 3 months, there were significant decreases in body weight, body fat percentage, serum total cholesterol level, LDL cholesterol level, and fitness in the intervention group versus the control group. After a one year follow-up, there were significant differences between the intervention group and control group in body weight and body fat percentage (Nemet et al., 2005). The researchers identified that these results highlight the importance of multidisciplinary programs for the treatment of childhood obesity and emphasize their encouraging long-term effects (Nemet et al., 2005).

A qualitative research study by Torre, Akre, and Suris (2002), investigated the opinions of different school stakeholders on the feasibility and acceptability of current obesity prevention strategies that could be implemented in Swiss schools. A total of 40 school representatives from 6 different stakeholders groups were used in the study that included school directors, physical education teachers, catering staff, school nurses, and health educators. Open-ended questions were used to determine opinions regarding current obesity prevention recommendations for healthy eating and physical activity

promotion strategies. Results showed all participants approved the implementation of nutritional standards for food and drinks sold in schools, but thought that increasing the looks of healthy options was the best strategy to improve eating habits (Torre, Akre, and Suris, 2002). The researchers discovered that schools are a crucial setting to implement childhood obesity prevention strategies by encouraging healthy behaviors and to support and reinforce parents' efforts by spreading consistent and coherent health messages by school stakeholders. Successful implementation of current recommendations for obesity prevention in schools implies involving all of the stakeholders at an early stage of the project and adapting it to the local reality (Torre, Akre, and Suris, 2002).

Childhood obesity continues to increase even with awareness as a national health crisis. Current statistics regarding the growth of childhood overweight are alarming, especially in light of the potential short and long term health consequences. As noted by the prior studies, research shows that factors contributing to obesity are almost entirely modifiable on some level. It was important to conduct this study because specific behavior changes have been shown to result in positive outcomes, yet these changes have not been widely implemented. Addressing parental perceptions of childhood obesity and the school's role on prevention and intervention is just the stepping stone to reversing the issue. It is clear that interventions must begin early and must focus on prevention to achieve the goal of increasing quality years of life.

CHAPTER THREE

Methodology

Childhood obesity is a major health crisis that is becoming an epidemic among children and adolescents. It is estimated that over 12 million American children ages 2-19 years of age are overweight, primarily females. Interventions must begin early and focus on prevention strategies to achieve the goal of increasing quality years of life for today's children and families. The purpose of this study is to examine the contributing factors to childhood obesity, parental involvement, and to identify prevention strategies in controlling this epidemic. The obesity epidemic occurs disproportionately in African American children making obesity prevention essential in this population. The study will educate children ages 5 to 12 years of age and their families in prevention strategies and early intervention techniques in a community setting in the piedmont region of South Carolina. The intent of the study was to identify factors that will decrease the prevalence of childhood obesity through prevention and early intervention. The research design used in the study was a descriptive study design, to gain an understanding of parental perceptions, interventions, and preventive aims in addressing childhood obesity.

Prior to conducting the interviews, permission from the Internal Review Board (IRB) was obtained from Gardner-Webb University to pursue the proposed study on childhood obesity. The convenience sample population included children and adolescent ages 5 to 12 years of age and their parents at a local after-school program. Using the body mass index (BMI) and the growth chart, the criteria for the sample population was the BMI-for-age growth to be equal or greater than the 95th percentile.

Prior to interviewing the subjects who had agreed to participate in the study, informed consent was obtained (see Appendix 1). The informed consent form detailed the purpose of the study and the subjects' rights for participating in research. Each participant and parent had the opportunity to read and have explained the information on the consent form. At any time during the study the participant or parent could decline to participate in the study. A copy of the consent form was given to all participants at the time of the initial interview. The form provided the participant with contact numbers of the primary investigator (PI) and the Internal Review Board (IRB) at Gardner-Webb University. The detailed consent provided information concerning the potential risks and benefits of the study. Approval from the local Boys and Girls club unit was given by the director for surveys to be distributed to parents to participate in the study. Each parent was given a letter and questionnaire to be returned to an enclosed envelope at their earliest convenience. Of the 40 questionnaires distributed at the after-school club, only 25 surveys (62%) were returned completely filled out.

The data collection method consists of obtaining BMI's of the participants and measurement of height and weight by the parents. Permission from Dr. Polivka was given to use the survey for the current study to assess parental perception of obesity in school-age children. The revised questionnaire was chosen by the researcher because it addressed parental perceptions of childhood obesity in school-age children in prior studies. A 26-question Likert scale questionnaire was used to evaluate parental perceptions on childhood obesity that included agreement options of strongly agree, agree, neutral, disagree, and strongly disagree was used (see Appendix 5). Demographic information on the parent and child was collected, including the parents and child's

height and weight (see Appendix 3 and 4). Data analysis included the BMI from the height and weights. A healthy weight ranges 5th percentile up to the 85th percentile, at risk of overweight ranges 85th to 95th percentile or BMI greater than 25kg/m, and overweight is equal to or greater than the 95th percentile or BMI greater than 30kg/m . The goal of the study was for the subjects to fall below the 95th percentile or less than 25kg/m and maintain a healthy weight and lifestyle.

Data was entered into the Statistical Package for the Social Sciences (SPSS 18.0) and analyzed descriptively. Each parent and child's height and weight were calculated for the BMI using the internet BMI calculator. A BMI less than 18.5kg/m was underweight, BMI between 18.5-24.9kg/m was of normal weight, BMI between 25-29.9 was overweight, and a BMI over 30kg/m was obese. The survey took approximately five to ten minutes to complete. Many parents felt that the survey was easy to complete and beneficial in addressing the childhood obesity epidemic. Finally, the instrument was reviewed for content validity by the director on the local Boys and Girls club to determine feasibility and readability. All completed surveys were returned in a timely manner to be included in the research study.

Chapter Four

RESULTS

The purpose of the study, Parental Perceptions of Childhood Obesity and the School's Role on Prevention and Interventions in Childhood Obesity was to examine the contributing factors to childhood obesity, parental involvement, and to identify prevention strategies in controlling childhood obesity while gaining an understanding of parental perceptions of the school's role in addressing childhood obesity.

A total of 40 questionnaires were distributed and 25 (62%) were returned to the researcher. Parents completing the survey were predominately white females, less than 39 years of age, and high school graduates with a BMI between 19.2 and 44.3 and a mean BMI of 24.3 (see Table 1). The child that the parent presented was between 9 and 10 year of age, white, female and had a BMI between 14.1 and 24.3 and a mean BMI of 18.3 (see Table 2).

Parents' Perception of Childhood Obesity (see Table 3)

Parents were asked to rate whether they strongly agree/agree, neutral, or strongly disagree/agree to their perception of childhood obesity. A large majority of the parents believed that childhood obesity is becoming more common (84%), normal weight is important to the health of children (100%), reducing childhood obesity is easier than reducing obesity in adulthood (76%), and that childhood is a significant cause of peer rejection (76%). Surprisingly (56%) of parents felt that most obese children will not outgrow their obesity.

Parents' Perception of the causes of childhood obesity (see Table 4)

Parents were asked what the major and minor role to the causes of childhood obesity. The majority of the parents responded that inactivity (96%), poor eating behavior (100%), eating too much (92%), junk food machines (88%), lack of money to buy nutritious foods (84%), and peer pressure (84%) are the major causes of childhood obesity. Lack of parental control over what children eat (72%), heredity/genetics/family traits (76%), cultural factors (44%) and hormone problems (48%) did not show as much agreement among parents surveyed.

Parents' Perception of the School's Role in the Prevention and Treatment (see Table 5)

There were 11 survey questions that addressed the parental perception if the school was assisting in the fight against childhood obesity. Parents felt strongly about schools having physical education classes (92%), and eliminating junk food machines (80%). Parents supported units on nutrition and weight control should be available in every school and offering special low calorie meals (76%). Parents were more divided on the other topics listed fairly evenly in their opinions of strongly agreeing, neutral thinking or strongly disagreeing. Surprisingly, 32% of parents did not think the schools should recommend treatment for weight loss, recommend treatment for weight loss for all children who are obese (56%) or counsel the parents of obese children (48%).

In conclusion, the study revealed that parental perceptions of causes of childhood obesity are mainly due to inactivity, poor eating behavior, eating too much, and lack of money to buy nutritious foods (see Appendix 5). The parental perception of the school's role in the prevention and treatment were highest among the need for physical education

classes and units on nutrition and weight control, elimination of junk food machines, and special low-calorie meals (see Appendix 5). Parental perception was divided on the prevention and treatment on not doing enough to alleviate childhood obesity, on-site weight control treatment programs, counseling the parents of obese children (see Appendix 5). Split parental perception was on recommendation for treatment for weight loss only for children with a health problem affected by their obesity (see Appendix 5).

Chapter Five

DISCUSSION

The obesity epidemic affects both boys and girls and has occurred in all age, race, and ethnic groups throughout the United States. It is a serious and worsening problem that will have dramatic health effects on future generations. Childhood obesity continues to grow despite the attention that it is being given. Since obesity has a long-lasting and serious negative health consequences that may affect the health of future generations, efforts must begin immediately to mount a unified and cooperative strategy to prevent obesity in children.

This study, “Parental Perception of Childhood Obesity and the School’s Role on Prevention and Interventions in Childhood Obesity”, attempted to understand parental perception and beliefs related to causes, and what the school role should have in prevention, identifying, and treating childhood obesity. The study concluded that parents support physical education, nutrition and weight control classes, special low-calorie meals, and elimination of junk food machines. Prevention is the key to controlling childhood obesity and efforts must begin immediately and continue to be modified. Parental involvement for prevention starts in the home by encouraging outdoor playtime, limiting television time, video game time, and computer time. Prevention and early interventions can decrease the prevalence of childhood obesity. Families, peers, and health care providers are important sources of interpersonal influence that can increase or decrease commitment to and engagement in health promoting behavior.

Findings from this study indicated that childhood obesity is of even greater concern among parents and that normal weight is important to the health of children. Nearly all of the participants in this study believed that childhood obesity was growing more prevalent. The four leading causes according to the participants in this study were inactivity, poor eating behavior, eating too much, and lack of money to buy nutritious foods. Cultural factors, hormone problems, lack of parental control over what children eat, heredity, genetics, and family traits were the least common causes of childhood obesity according to the participants. The majority of the participants believed that peer pressure is a cause of childhood obesity as well as a significant cause of peer rejection.

Despite the increased prevalence in obesity, there are very few treatment programs available for childhood obesity. Half of the participants believed that the schools were not doing enough to alleviate childhood obesity and felt that recommending treatment for weight loss for children who asked for help, recommending treatment for weight loss for all children who are obese, and having an on-site weight control treatment program would be a preventive strategy for the school system to combat the fight against childhood obesity. Treatment programs for childhood obesity require a multidisciplinary approach and should include dietary changes, nutritional education, changes in physical activity patterns, behavioral modification, and parental involvement.

The majority of the participants believed that preventive strategies and treatment include physical education classes, nutrition and weight control classes, elimination of junk food in vending machines, and special low-calorie meals should be available in every school.

Limitations of the Study

This convenience sample descriptive study presents with actual and potential limitations. This study was limited to only one local afterschool program in the community which resulted in a small sample size. There was concern for self-report bias because participants were asked to report the height and weight of the child and parent. There was no direct contact with the participants by the researcher which could have resulted in low response rate. Only one letter was sent out to the subjects for participation in the study. Therefore, the results of this study may not reflect the perceptions of other parents in other school districts or regions.

Implications for Nursing Practice

Further research is needed to identify and prioritize the barriers that prevent schools from being effective in the identification and treatment of childhood obesity is necessary if schools are to meet the challenges of childhood obesity. Counseling and referral systems need to be in place for both parent and child for treatment. The role of the school health services can be beneficial in the prevention and treatment of childhood obesity.

Childhood obesity is a major health problem and disproportionately affects African American adolescents at an alarming rate. It was found that 80% of the participants identified inactivity, poor eating behavior, lack of parental control in what was eaten, and eating too much as the main causes of childhood obesity (Murphy & Polivka, 2007). Ensuring obesity prevention and intervention is essential for obese children and their families. Focusing on children at risk for obesity and parent-focused

interventions can increase a change for health behaviors to decrease the epidemic of childhood obesity. Using the age-growth chart and assessing BMI's of at risk children is a positive step forward in addressing the issue early on and setting up interventions to promote healthy food selections, healthy lifestyle choices, increase physical activity and parental involvement.

The childhood obesity epidemic affects both boys and girls of all ages, race, and ethnic groups throughout the United States. Ensuring obesity prevention, intervention and treatment is essential for obese children and their families. Benefits of the study showed that utilizing the school has great potential for identifying and meeting the health care needs of the school-age population, thus setting the course for a healthy adulthood. School is an ideal setting for health promotion to help alleviate the increasing disease burdens due to unhealthy lifestyles.

In conclusion, the findings from the study "Parental Perception of Childhood Obesity and the School's Role on Prevention and Interventions in Childhood Obesity" showed getting parents involved and better informed about childhood obesity, nutrition and exercise, improving the quality of foods in school, making foods more affordable and accessible for families, and focusing more on physical education is important to reduce immediate and long-term health consequences. Hopefully parental perception of childhood obesity and school interaction will take a more active role in the prevention and intervention of childhood obesity.

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May 18, 2011

Dear Parent or Guardian:

Obesity has become an increasing problem in society with our children. We are interested in studying parental perceptions of Body Mass Index as a screening tool for obesity, determine parental preferences for the receipt of Body Mass Index information and assess parental perceptions of the school's role in the prevention and treatment of childhood obesity.

We are asking that you complete the attached questionnaire within the next couple of days. It should take about 5-10 minutes to complete. If you choose to participate in this study, please return the completed survey to the envelope. Your responses to the survey are anonymous, as we are not collecting information that could link your survey specifically to you. You may choose not to participate or you may choose not to answer questions in the study. By returning the survey, you are indicating your informed consent to participate in this study. A brief summary of the study results will be made available at the Boys & Girls club upon completion of the study by late summer of 2011.

The Boys & Girls club has approved this research. This research will help lay the foundation for future research to focus on ways to help address childhood obesity.

Thank you for your time.

Written permission to Monique Jones RN, BSN from Dr. Barbara Polivka on March 11, 2011 was given to use the tool for study.

From: Ms Monique Grant Jones [mailto:mjones5@gardner-webb.edu]

Sent: Thursday, March 10, 2011 3:25 PM

To: Polivka.1@osu.edu

Cc: Dr. Mary Alice Hodge

Subject: Tool permission

Hello Dr. Polivka,

I am sending this email to ask permission to use the survey used in "Parental Perceptions of Body Mass Index and Obesity in School Age Children" from the study done in 2006 by Maureen Murphy.

I am currently doing a research of "Parental Perception of Childhood Obesity" in my area and would like to utilize the revised survey for my study.

Sincerely,

Monique Jones

Graduate Nursing Student

Gardner-Webb University

From: Polivka, Barbara [bpolivka@con.ohio-state.edu]

Sent: Friday, March 11, 2011 3:50 PM

To: Ms Monique Grant Jones; Polivka.1@osu.edu

Cc: Dr. Mary Alice Hodge

Subject: RE: Tool permission

Yes you have permission to use the tool. Good luck in your research!

Barbara J. Polivka, PhD, RN

Associate Professor

Specialty Track Director, Nursing and Health Systems Management

The Ohio State University College of Nursing

324 Newton Hall

1585 Neil Avenue

Columbus, OH 43210

(614) 292-4902

polivka.1@osu.edu

Survey to Evaluate Parental Perceptions on Childhood Obesity

Table 1

DEMOGRAPHICS

Please circle Characteristic: Parents with Children in After School Program

Age:

Height:

Weight:

Adults: 39 years and under

40 years and over

Race:

White

Black

Hispanic

Asian

Bi-racial/Other

Gender:

Male

Female

Educational Level:

Some high school

High school graduate

College graduate

Table 2**DEMOGRAPHICS**

Please circle Characteristics: Children within After School Program

Ages:

Height:

Weight:

5-6 years old

7-8 years old

9-10 years old

11-12 years old

*If more than one child, please list each age.

Race:

White

Black

Asian

Other/mixed

Gender:

Male

Female

Grade:

Pre-K and Kindergarten

First grade

Second grade

Third grade

Fourth grade

Fifth grade

PLEASE PLACE A CHECK FOR ANSWER

Table 3. Parents' Perceptions of Childhood Obesity

	Strongly Agree/Agree	Neutral	Strongly Disagree/Disagree
1. Childhood obesity is becoming more common.			
2. Normal weight is important to the health of children.			
3. Reducing childhood obesity is easier than reducing obesity in adulthood.			
4. Childhood obesity is a significant cause of peer rejection.			
5. Most obese children will outgrow their obesity.			

Table 4. Parents' Perceptions of the Causes of Childhood Obesity

	Major Role	Minor Role
1. Inactivity (video games/TV/computer time)		
2. Poor eating behavior		
3. Lack of parental control over what children eat		
4. Eating too much		
5. Heredity/genetics/family traits		
6. Junk food machines		
7. Cultural factors		
8. Hormone problems		
9. Lack of money to buy nutritious foods		
10. Peer pressure		

Table 5. Parents' Perceptions of the School's Role in the Prevention and Treatment

	Strongly Agree/Agree	Neutral	Disagree/ Strongly Disagree
1. Physical education classes			
2. Units on nutrition and weight control should be available in every school			
3. Eliminate junk food machines			
4. Recommend treatment for weight loss only for children (or parents of children) who ask for help.			
5. Special low-calorie meals			
6. On-site weight control treatment programs			
7. Not doing enough to alleviate childhood obesity			
8. Recommend treatment for weight loss for all children who are obese			
9. Counsel the parents of obese children			
10. Should not recommend treatment for weight loss			
11. Recommend treatment for weight loss only for children with a health problem affected by their obesity.			

Gardner-Webb University
Institutional Review Board
Application to Conduct Research with Human Subjects
 (Researcher must complete this form before request can be submitted to IRB)

Name of Researcher Monique Jones
Date 05-06-2011
GWU ID# 000813129
Email Address mjones5@gardner-webb.edu
Mailing Address 1922 Highway 11 West, Chesnee, SC 29323
Phone 864-461-7582
Department _____
Faculty Sponsor (if student research)

Title of Research Project Parental Perception of Childhood Obesity and School's Role on Prevention and Interventions in Childhood Obesity.

What is your hypothesis/research question(s) Parental perceptions of causes of childhood obesity and the schools' role in the prevention and treatment; Can prevention and early interventions decrease the prevalence of childhood obesity?

How many subjects do you expect to use, and how will you obtain this sample?

At least 30 subjects will be used. Participation is obtain by doing a survey and returning to a labeled box.

What is your research methodology? Attach any tests to this form with the appropriate references. A Likert scale questionnaire will be used to evaluate parental perception on childhood obesity.

Describe the research procedure. Attach a copy of the consent form and a copy of the debriefing statement. Describe how and when these will be

used.) Upon returning surveys indicates informed consent to participate in the study.

Does this research pose risk to the subject? If so, what protocol will be enacted to protect the subject? No

Does this research involve deception of any kind? (If applicable, please explain.) No

Will any incentives be used? If so, please explain. No

How will you protect the subject's right NOT to participate in your research? Research is voluntary and anonymous.

How will you protect the subject's confidentiality of results? No names listed on the questionnaire and survey is anonymous.

How, when, and where will the research results be reported?
A brief summary of the results will be available upon completion of the study late Summer of 2011 at the after school program.

If this changes, be sure to contact the IRB with an update. If, for example, a faculty member publishes research results, he/she should forward this information to the IRB.

When do you anticipate completing this research? Summer of 2011

Signatures:

Researcher Monique Jones

Date May 6, 2011

Print Above Name Monique Jones

Faculty Sponsor _____

Date _____

(if student research)

Print Above Name

Required attachments:

- ☐ **Copy of Informed Consent Form**
- ☐ **Copy of Course Completion Certificate**
- ☐ **Permission to use published instruments (if applicable)**
- ☐ **Signed institutional permission or IRB application (if applicable)**

Revised 08/03/2010

Survey to Evaluate Parental Perceptions on Childhood Obesity

Table 1

DEMOGRAPHICS

Please circle Characteristic: Parents with Children in After School Program (N= 25)

Age:	<u>n (%)</u>
Adults: 39 years and under = 1	17 (68%)
40 years and over = 2	8 (32%)
Race:	
White = 1	17 (68%)
Black = 2	6 (24%)
Hispanic = 3	2 (8%)
Other/mixed = 4	0
Gender:	
Male = 1	4 (16%)
Female = 2	21 (84%)
Educational Level:	
Some High School = 1	4 (16%)
High School graduate = 2	12 (48%)
College graduate = 3	9 (36%)

Body Mass Index:

Minimum 19.2	Maximum 44.3	Mean 28.34	Std. Deviation 7.2908
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Table 2**DEMOGRAPHICS****Please circle Characteristics: Children within After School Program (N = 26)**

Ages:	<u>n (%)</u>
1. 5-6 years old	6 (23.1%)
2. 7-8 years old	7 (26.9%)
3. 9-10 years old	11 (42.3%)
4. 11-12 years old	2 (7.7%)

Race:	
White = 1	11 (42.3%)
Black = 2	7 (26.9%)
Hispanic = 3	0
Other/mixed = 4	8 (30.8%)

Gender:	
Male = 1	11 (42.3%)
Female = 2	15 (57.7%)

Grade:	
First grade = 1	8 (30.8%)
Second grade = 2	6 (23.1%)
Third grade = 3	3 (11.5%)
Fourth grade = 4	7 (26.9%)
Fifth grade = 5	2 (7.7%)

Body Mass Index:

Minimum 14.1%	Maximum 24.3	Mean 18.34	Std. Deviation 2.769
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PLEASE PLACE A CHECK FOR ANSWER

Table 3. Parents' Perceptions of Childhood Obesity (PP) (n = 25)

	Strongly Agree/Agree n(%)	Neutral n(%)	Disagree/ Strongly Disagree n(%)
1. Childhood obesity is becoming more common.	21 (84%)	1 (4%)	3 (12%)
2. Normal weight is important to the health of children.	25 (100%)		
3. Reducing childhood obesity is easier than reducing obesity in adulthood.	19 (76%)	5 (20%)	1 (4%)
4. Childhood obesity is a significant cause of peer rejection.	19 (76%)	3 (12%)	3 (12%)
5. Most obese children will outgrow their obesity.	5 (20%)	6 (24%)	14 (56%)

Table 4. Parents' Perceptions of the Causes of Childhood Obesity (CCO) (n = 25)

	Major Role n(%)	Minor Role n (%)
1. Inactivity (video games/TV/computer time)	24 (96%)	1 (4%)
2. Poor eating behavior	25 (100%)	
3. Lack of parental control over what children eat	18 (72%)	7 (28%)
4. Eating too much	23 (92%)	2 (8%)
5. Heredity/genetics/family traits	19 (76%)	6 (24%)
6. Junk food machines	22 (88%)	3 (12%)
7. Cultural factors	11 (44%)	14 (56%)
8. Hormone problems	12 (48%)	13 (52%)
9. Lack of money to buy nutritious foods	23 (92%)	2 (8%)
10. Peer pressure	21 (84%)	4 (16%)

Table 5. Parents' Perceptions of the School's Role in the Prevention and Treatment (SR) (n = 25)

	Strongly Agree/Agree n(%)	Neutral n(%)	Disagree/ Strongly Disagree n(%)
1. Physical education classes	23 (92%)	2 (8%)	
2. Units on nutrition and weight control should be available in every school	19 (76%)	6 (24%)	
3. Eliminate junk food machines	20 (80%)	3 (12%)	2 (8%)
4. Recommend treatment for weight loss only for children (or parents of children) who ask for help.	11 (44%)	10 (40%)	4 (16%)
5. Special low-calorie meals	19 (76%)	6 (24%)	
6. On-site weight control treatment programs	10 (40%)	11 (44%)	4 (16%)
7. Not doing enough to alleviate childhood obesity	13 (52%)	11 (44%)	1 (4%)
8. Recommend treatment for weight loss for all children who are obese	14 (56%)	8 (32%)	3 (12%)
9. Counsel the parents of obese children	12 (48%)	8 (32%)	5 (20%)
10. Should not recommend treatment for weight loss	8 (32%)	7 (28%)	10(40%)
11. Recommend treatment for weight loss only for children with a health problem affected by their obesity	15 (60%)	5 (20%)	5 (20%)